
The future of experiences and Drupal

ユーザー体験とDrupalの将来

プレストン・ソー • 2018年11月17日 • DrupalCamp DEN Japan 2018 基調講演

はじめまして！

プレストン・ソーはイノベーションリーダー、研究者、スピーカー、そして「*Decoupled Drupal in Practice* (Apress 2018年)」の著者です。

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preston.so@acquia.com • @prestonso • #futuresdrupal

Welcome!

Preston So is an innovation lead, researcher, speaker, and author of *Decoupled Drupal in Practice* (Apress, 2018).

A globally recognized voice on decoupled Drupal and subject matter expert in the decentralized web and conversational design, Preston is Director of Research and Innovation at Acquia, where he helms Acquia Labs, an innovation center architecting projects for clients like the State of Georgia and Nestlé Purina.

Having spoken twice at SXSW Interactive, Preston is a sought-after presenter with keynotes on four continents and in three languages.

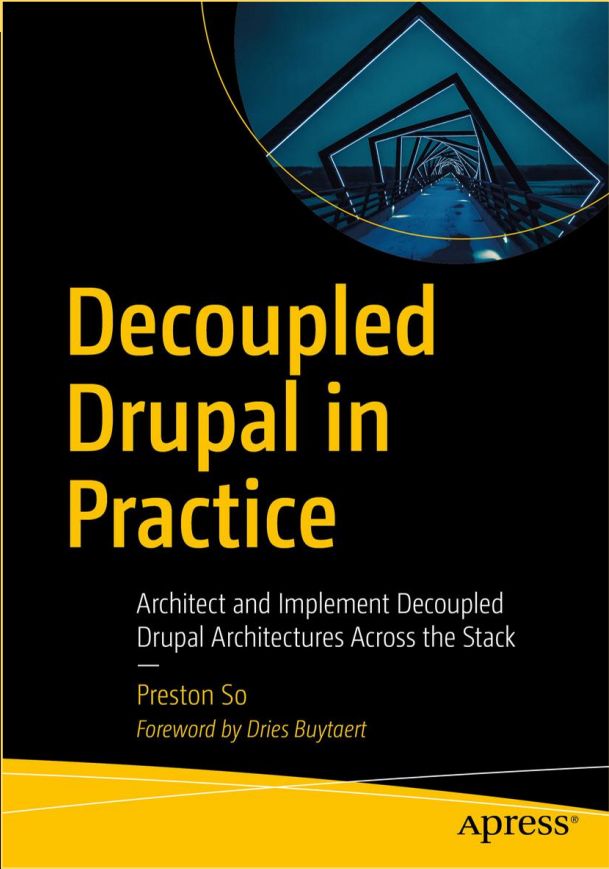
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Decoupled Drupal in Practice

Pre-order now:

tiny.cc/decoupled-in-practice

In the first and only comprehensive guide to decoupled Drupal across the stack, with a foreword by Drupal project lead Dries Buytaert, learn everything you need to know about decoupled Drupal—from building the back end and designing APIs to integrating with front-end technologies.



Decoupled Drupal in Practice

Architect and Implement Decoupled
Drupal Architectures Across the Stack

—
Preston So

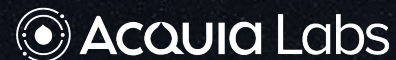
Foreword by Dries Buytaert

apress®



We're Acquia's innovation lab — a small team of generalist engineers building pioneering projects that push the envelope in emerging technologies.

Have forward-looking ideas but need expertise?
Acquia Labs is your innovation partner.



What we'll cover

- A history of content in Drupal
- Constructing conversational content
- From a page-driven to a geospatial mentality
- Augmented and virtual reality
- Smart infrastructure and digital signage
- Epilogue: The future of Drupal

1

A history of content in Drupal

Websites

Drop.org

- Large swaths of primarily narrative text
- Images interspersed throughout and sometimes span viewport
- Multimedia scoped tightly to areas of page; videos are largely synonymous with images
- Interactions via keyboard and mouse

2000

[home](#) | [faq](#) | [diary](#) | [search](#) | [submit news](#) | [user account](#)

🔥 **American democracy is taking a step forward.**

Submitted by [Dibbit](#) on Sunday, December 03rd, 2000 - 16:47 [Politics & Freedom](#)

In the light of America's failure to elect a President, The Queen of England has given notice to the revocation of their independence. The revocation containing this notice also included some rules that are to be introduced in America.

[[read more](#) | 3493 bytes | [10 comments](#)]

🔥 **Hack for the community!**

Submitted by [Refrag](#) on Saturday, December 02nd, 2000 - 14:37 [Coding & Webdesign](#)

Hackers have a great sense of community, I just wish that more of their time was spent benefitting the community.

[[read more](#) | 2043 bytes | [2 comments](#)]

Older headlines

Wednesday, Nov 15th

- [kuro5hin.org starts to 'diarize'](#)
- [Cloning around](#)

Monday, Nov 13th

- [What features would you add to your AIBO?](#)
- [What makes a good website?](#)

Friday, Nov 10th

- [Halucenogenic Psychotherapists](#)

Thursday, Nov 9th

Drupal 1.0 released
Drupal 3.0 released

2001

The screenshot shows the Drupal.org website interface. At the top is a navigation bar with links: home | user blogs | collaborative book | archives | chatbox | cvs messages | forum | cvs access | drupal sites | projects | search | user account. Below this is a section titled 'Drupal engine' with a 'Log in' button. A submission entry is shown: 'Submitted by kika@trip.ee on Monday, January 21, 2002 - 16:09'. The 'Project description' section states: 'Drupal is the English pronunciation for the Dutch word 'druppel' which stands for 'drop'. Drupal is a content management/discussion engine suitable to setup or build a content driven or community driven website. We aim towards easy installation, excessive configuration and fine-grained maintenance capabilities. Due to its modular design Drupal is flexible and easy to adapt or extend. Drupal is written using PHP. The source code is available under terms of the GNU General Public License (GPL)'. To the right of the description is a login form with fields for 'Username:' and 'Password:', a 'Remember me' checkbox, and buttons for 'Log in' and 'REGISTER'. Below the description is a 'Mission statement' section: 'To develop a leading edge open-source content management system that implements the latest thinking in community publishing, knowledge management, and software design. We value flexibility, simplicity, and utility in our product; teamwork, innovation, and openness in our community; and modularity, extensibility and maintainability in our code.' To the right of the mission statement is a 'Project information' section showing 'Drupal' with 'Bugs: 9 open' and 'Features: 13 open'. At the bottom is a 'Download Drupal' section with a list of versions: 'Drupal 3.0.2 (2001/12/26 - release notes - latest version)' and 'Drupal 3.01 (2001/10/15 - release notes)'.

drupal.org

home | user blogs | collaborative book | archives | chatbox | cvs messages | forum | cvs access | drupal sites | projects | search | user account

Drupal engine Log in

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Project description

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Mission statement

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Download Drupal

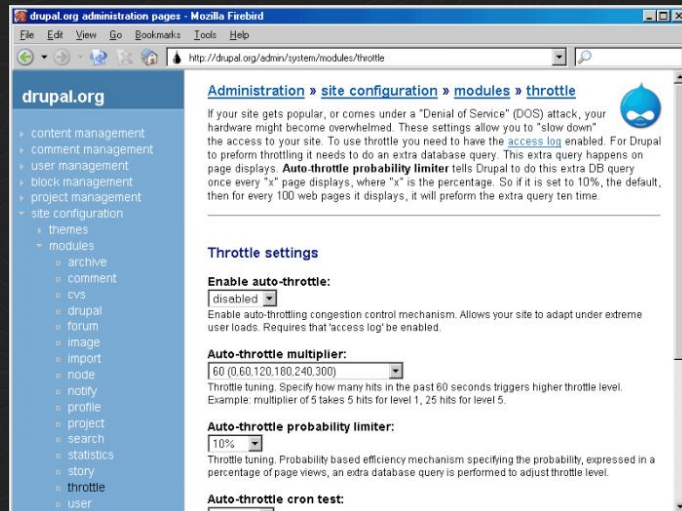
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Project information

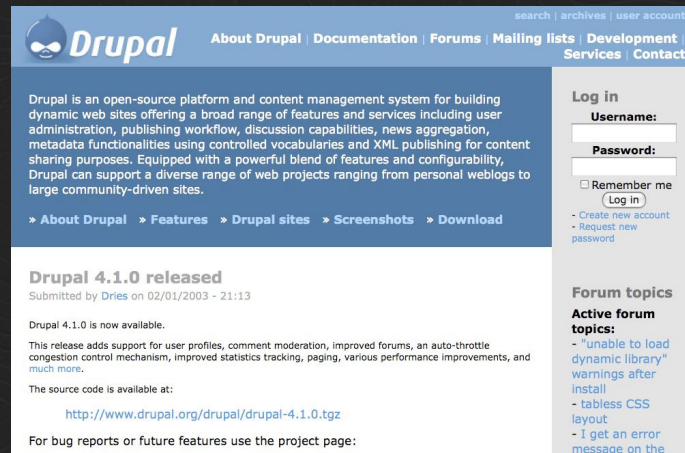
Drupal
Bugs: 9 open
Features: 13 open

Log in REGISTER

Drupal 4.0 released

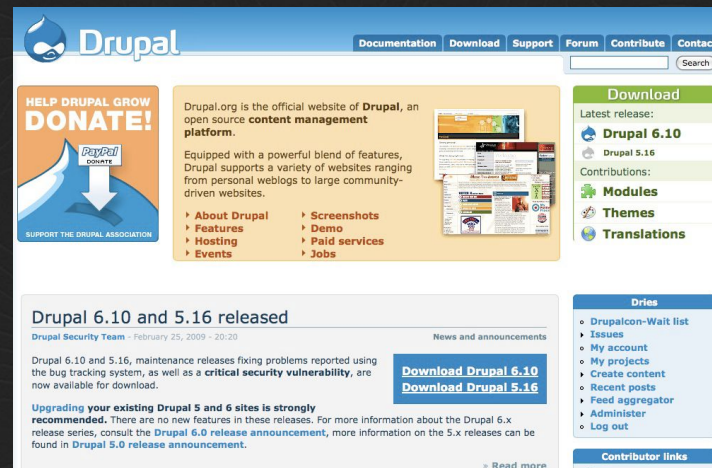
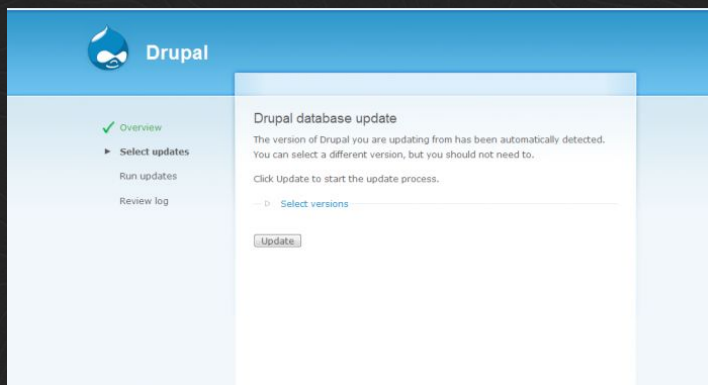


2002



Drupal 6.0 released

2008



Websites

Mobile

Responsive

Spark ●

2012

- Large swaths of text span viewport
- Images span viewport
- Multimedia spans viewport
- Interactions via gestures

At right: Mobile-first editing

The screenshot shows a mobile web editor interface. At the top, there are three tabs: 'Body' (selected), 'Format', and 'Insert'. Below the tabs is a toolbar with icons for bold (B), italic (i), underline (U), bulleted list, numbered list, and link. The main content area displays a text article about Earl Scruggs. The text is wrapped to fit the mobile viewport, with some words like 'Flatt' and 'Dierks' appearing on separate lines. The article discusses Scruggs' death and his legacy in bluegrass and country music.

Body ▼ Format Insert

B *i* U [List Icons]

NASHVILLE, Tenn. -- It may be impossible to overstate the importance of bluegrass legend Earl Scruggs to American music. A pioneering banjo player who helped create modern country music, his sound is instantly recognizable and as intrinsically wrapped in the tapestry of the genre as Johnny Cash's baritone or Hank Williams' heartbreak.

Scruggs died Wednesday morning at age 88 of natural causes. The legacy he helped build with bandleader Bill Monroe, guitarist Lester Flatt and the rest of the Blue Grass Boys was evident all around Nashville, where he died in an area hospital. His string-bending, mind-blowing way of picking helped transform a regional sound into a national passion.

"It's not just bluegrass, it's American music," bluegrass fan turned country star Dierks Bentley said. "There's 17- or 18-year-old kids turning on today's country music and hearing that banjo and they have no idea where that came from. That sound has probably always been there for them and they don't realize someone invented that three-finger roll style of playing. You hear it everywhere."

Mobile

Drupal iOS SDK first released

Now known as Waterwheel.swift

2012



Wearables

Apple Watch

- Limited real estate means limited coexistence
- Limited text spans viewport
- Images span viewport
- Multimedia spans viewport
- Interactions via gestures

2015



Digital signage



Digital signage

University of Iowa campus signage

- Need for legibility means limited coexistence
- Limited text spans viewport
- Images span viewport
- Multimedia spans viewport
- No direct interaction except some gestures



2016



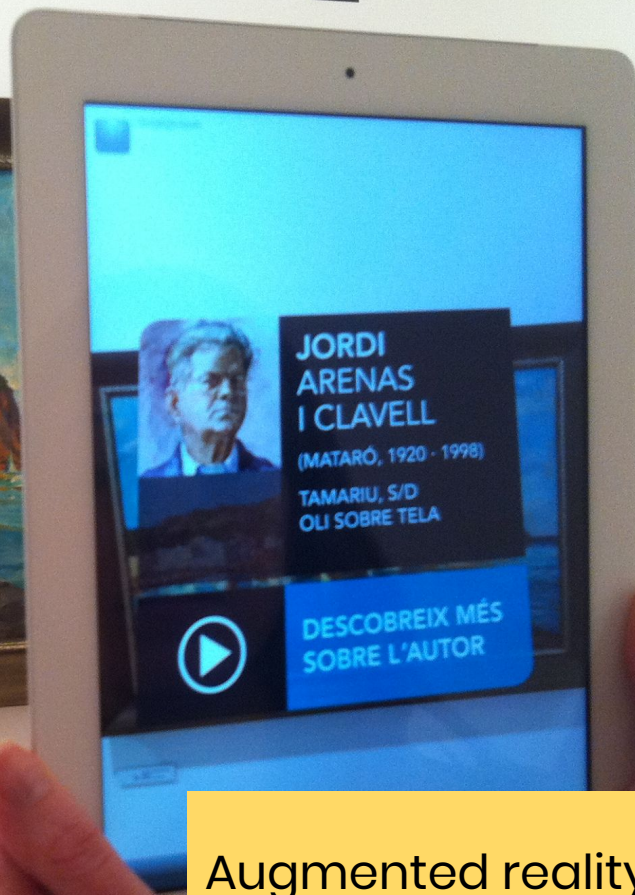
Set-top boxes

Drupal serves Roku

- Content display is locked down; limited design
- Limited text according to template
- Images according to template
- Multimedia according to template
- Interactions via remote



2017



tant en essència com per la
immensitat de la natura com
un violent onatge que trenca

nificència es tradueix en un
na, on també hi té presència
persones accentua aquesta
el qual ens n'allunyem quan
de color, llum i moviment.

Augmented reality

Shopping with augmented reality

- More flexible design, but content is situational and contextual
- Limited text superimposed based on context
- Images superimposed based on context
- Multimedia superimposed based on context
- Interactions via gestures and motion (content proprioception)

2017



Conversational interfaces



Conversational

Ask GeorgiaGov

- Content is inaccessible without particular track
- Limited text as self-contained utterances
- No images
- No multimedia except audio
- Interactions via dialogue (zero user interface)

2017



Ask GeorgiaGov is a new Alexa skill which gives citizens of the state of Georgia answers to questions about popular state government topics such as how to renew a driver's license, how to register to vote, how to enroll a child in pre-K programs, and even who Georgia's governor is.



Demo

Alexa, ask GeorgiaGov



Alexa, ask GeorgiaGov

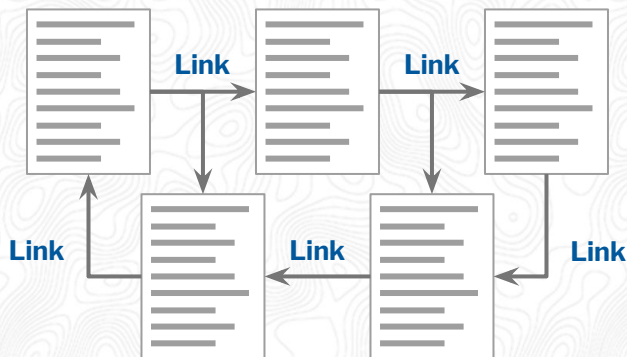


What's next?

2

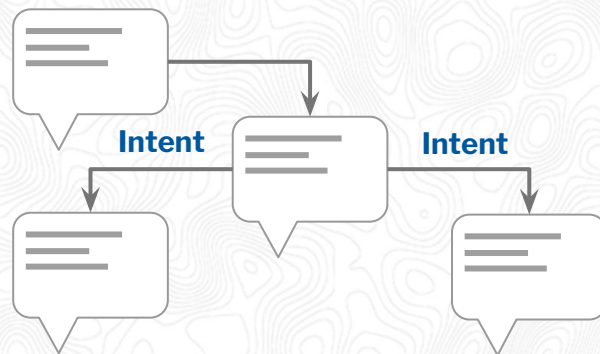
Constructing conversational content

Web vs. conversational content



Web content

Predominantly prose
Screen-based, visual
Link- and reference-rich
High verbosity tolerance



Conversational content

Single, brief thoughts
Aural, zero user interface
Link- and reference-poor
Low verbosity tolerance

**Information architecture
requires guided, unidirectional flows**

Conversational legibility

**Is this understandable to a listener
rather than a reader?**

Content discoverability

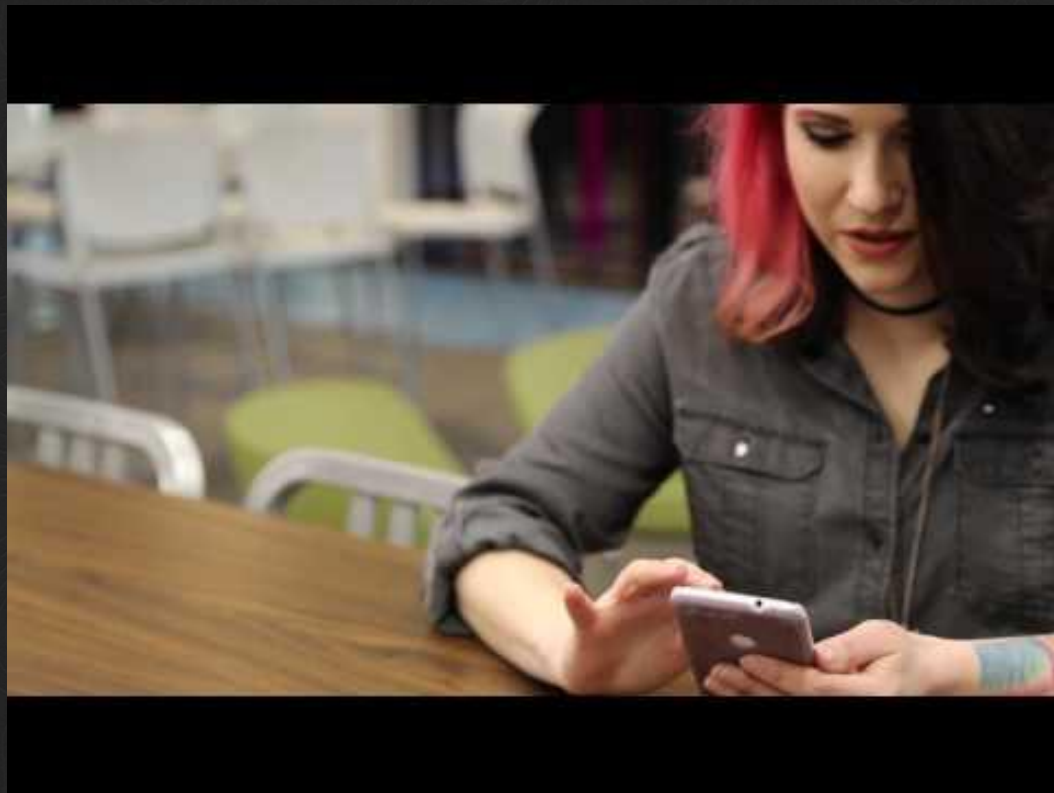
**Is this content reachable for listeners
using interaction flows, not links?**

**Voice interface usability
requires solely aural approaches**



Demo

Shopping with chatbots



Shopping with chatbots



Demo

Cooking with Alexa and Drupal



Cooking with Alexa and Drupal



Demo

**Voice-enabled search with
Nestlé Purina**



Voice-enabled search with Nestlé Purina

3

**From a page-driven to a
geospatial mentality**

**Our page-driven mentality
is no longer relevant**



Much of the web remains page-driven

Title

Lorem ipsum dolor sit a|

Body

Consectetur adipiscing elit
lorem ipsum dolor sit amet.

Lorem ipsum
dolor sit a|

Consectetur adipiscing
elit lorem ipsum dolor sit
amet.

[Read more](#)

As a result, our ideas of content are page-driven



Men's dress shirts on sale|

Our blazers are exquisite|

Ties 50% off|

But we need to move to a geospatial mentality

**Proximity marketing
is gaining traction in IoT**

**Content needs to be
geospatial, physical, situational**

**As a result, content is
decontextualized**

Beacons are here to stay

- According to a [report](#) by ABI Research in 2015, shipments of BLE beacons will break 400 million by 2020.
- Target, Walmart, and Macy's (big-box store chains in the U.S.) have [introduced](#) beacon technology to their sales floors.
- Marriott has [placed](#) beacons at 14 hotel locations to send promotional messages about hotel spas, bars, and restaurants.

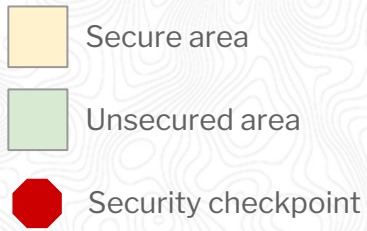
Where are beacons found?

- Airports
- Big-box stores (sales notifications)
- Hotels (seamless mobile check-in)
- Museums
- Restaurants

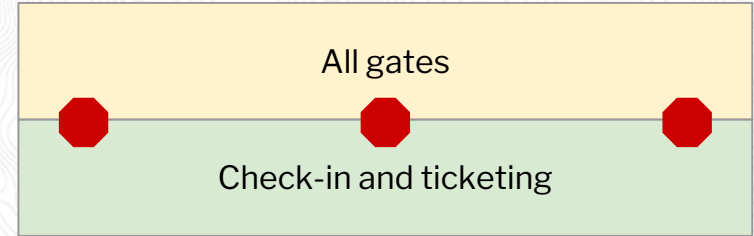


Demo

Beacons and Drupal at the airport



Departures level

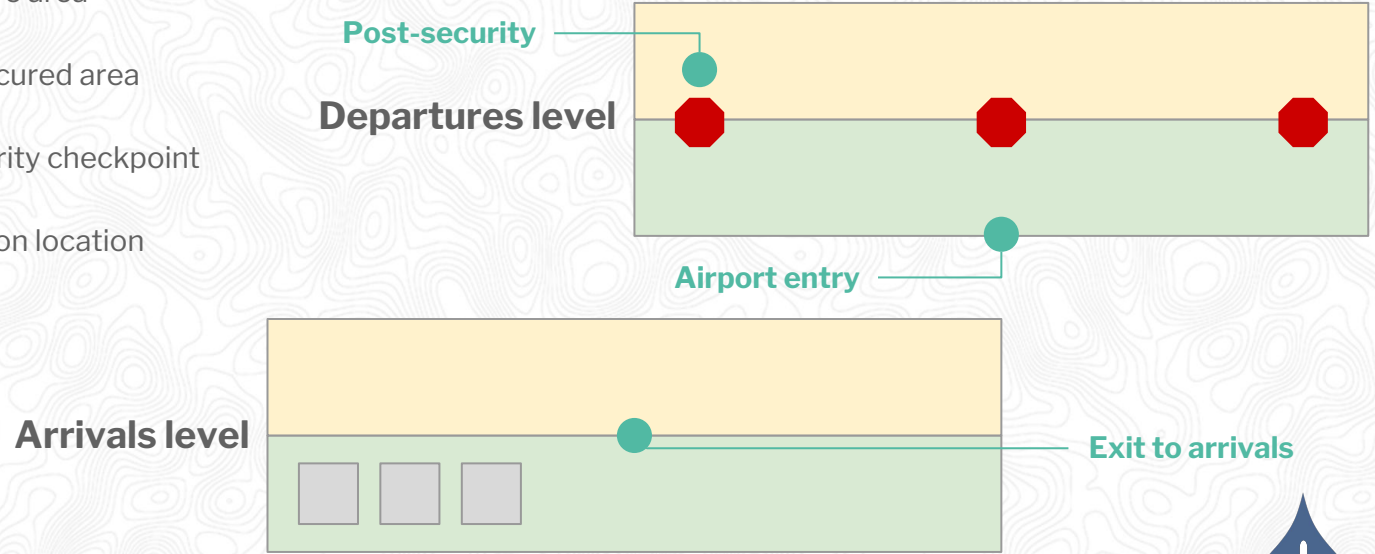
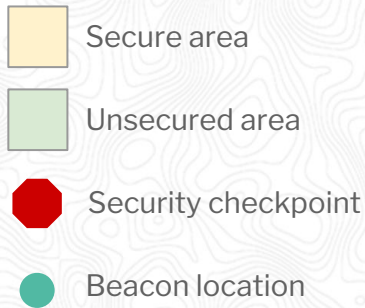


Arrivals level



Drupal International Airport
THE BEST AIRPORT IN THE CLOUD

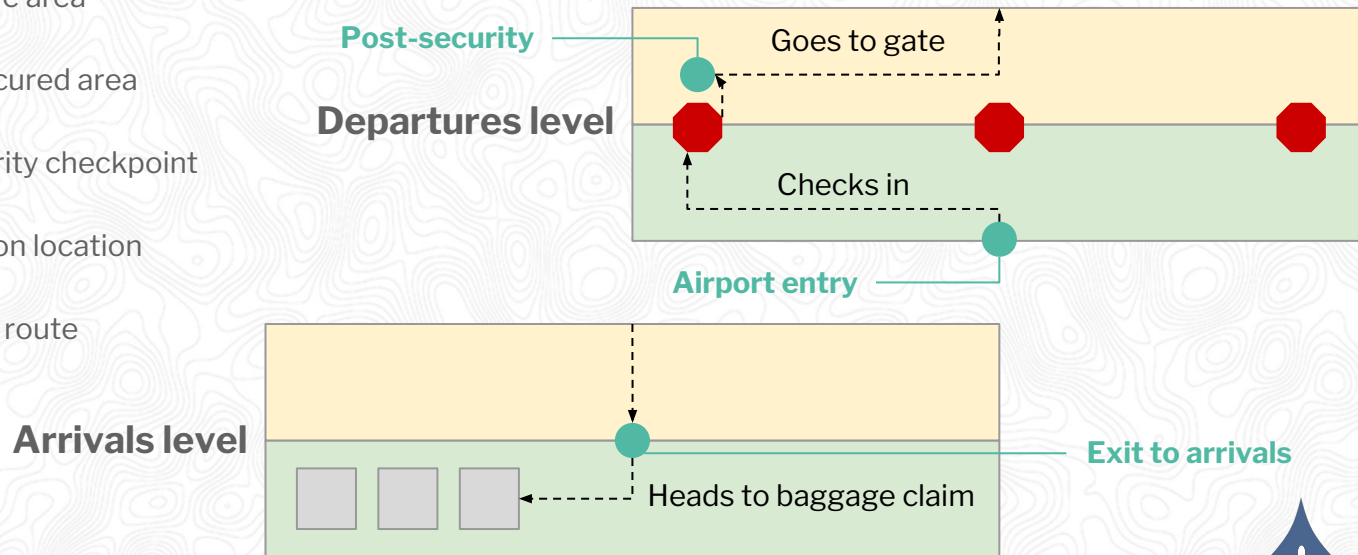
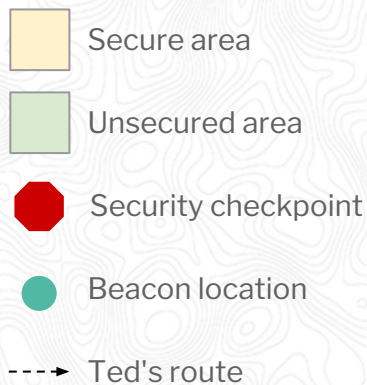
What's going on?



- **Airport entry beacon** welcomes user to the airport
- **Post-security beacon** notifies user gate and boarding time
- **Exit to arrivals beacon** notifies user baggage carousel

What's going on?





Drupal International Airport
THE BEST AIRPORT IN THE CLOUD

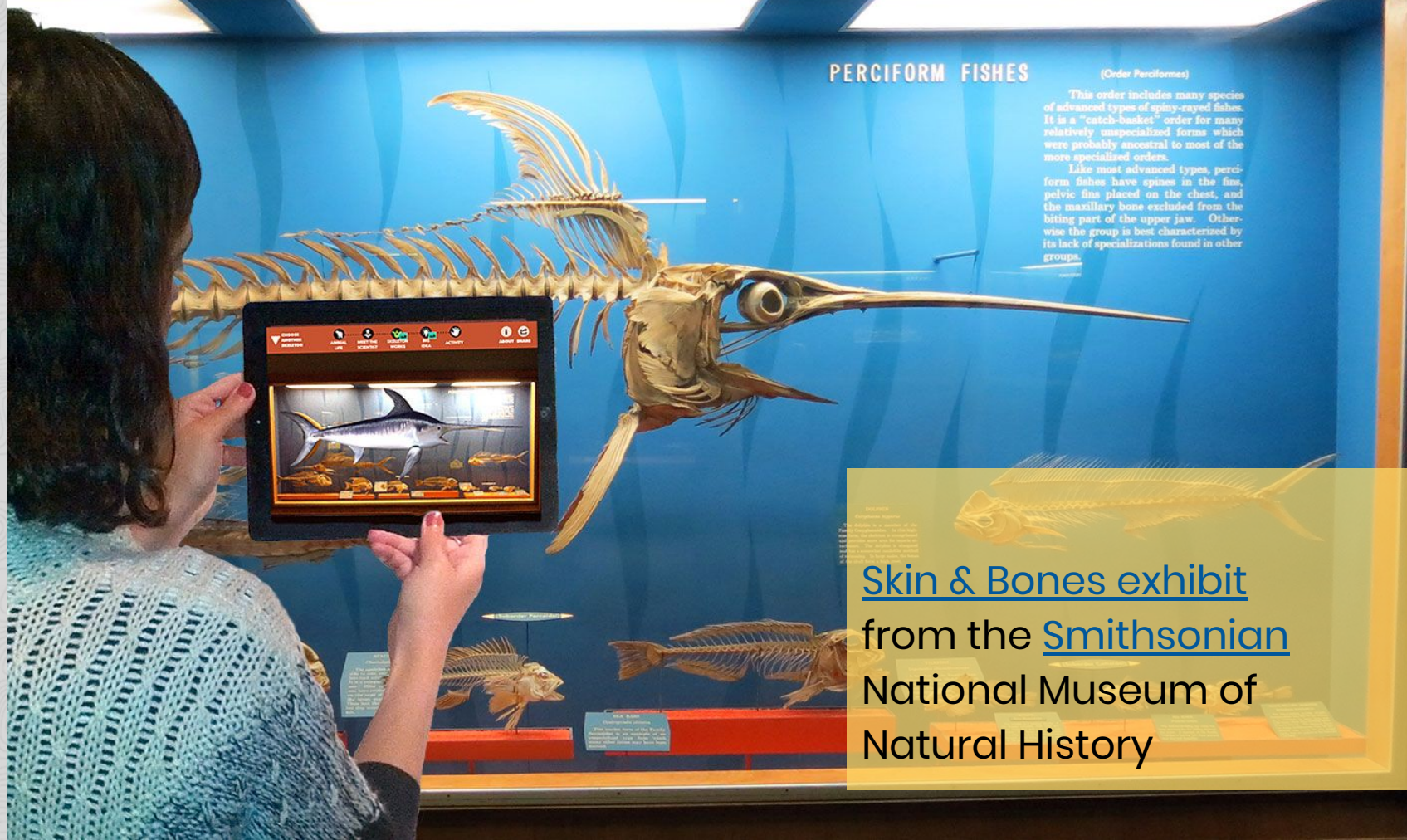
What's going on?



Beacons and Drupal at the airport

4

Augmented and virtual reality



PERCIFORM FISHES

(Order Perciformes)

This order includes many species of advanced types of spiny-rayed fishes. It is a "catch-basket" order for many relatively unspecialized forms which were probably ancestral to most of the more specialized orders.

Like most advanced types, perciform fishes have spines in the fin, pelvic fins placed on the chest, and the maxillary bone excluded from the biting part of the upper jaw. Otherwise the group is best characterized by its lack of specializations found in other groups.

[Skin & Bones exhibit](#)
from the [Smithsonian](#)
National Museum of
Natural History

Augmented reality is here to stay

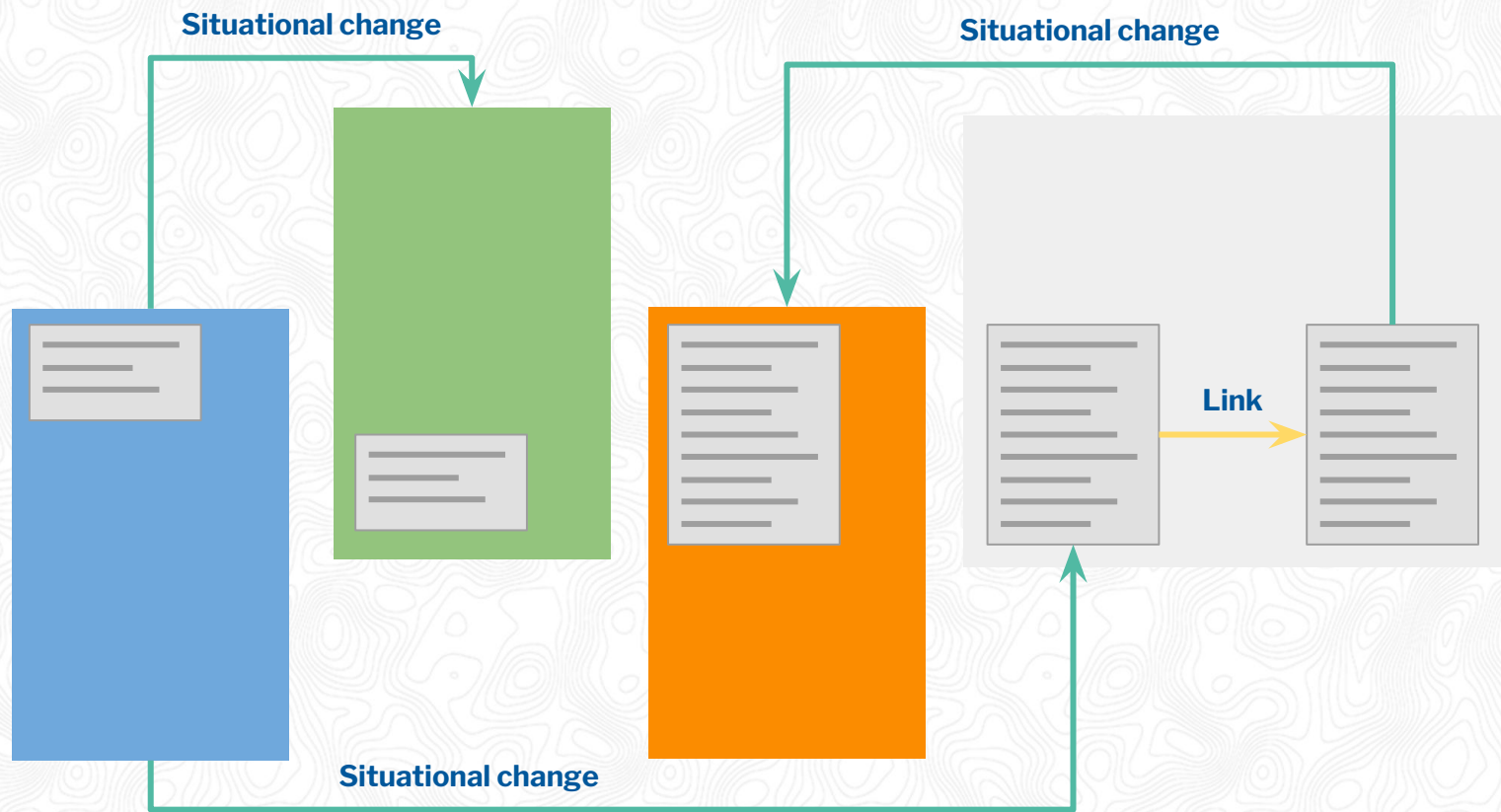
- [Forrester in 2016](#): "Companies will continue to experiment with AR and VR, setting the foundation for larger implementations in 2018 and 2019."
- Augmented reality was the subject of a U.S. Senate Committee on Commerce, Science, and Transportation [hearing](#) in November 2016.

Situational content

- Rather than simply showing additional information as an overlay when the user finds the right place to point their smartphone (an **active** or **explicit** interaction) ...
- ... it makes more sense to use beacons to have a **passive** or **implicit** interaction with what's in view directly to the user — and facilitate richer bidirectional interaction (and gathering of data).



We can no longer think of content as pages



We can think of them as experiential overlays



Toni's Freilandeier

\$2.49

Most recent review by criz: 5 out of 5
These are great!



Manner Wafer Cookies

\$1.99

Most recent review by dasjo: 5 out of 5
Delicious!

Content undergoes decontextualization in augmented reality

**Toni's
Freilandeier**

Price: 2.49

criz's review:
5 out of 5 stars

These are great!



**Manner Wafer
Cookies**

Price: 1.99

dasjo's review:
5 out of 5 stars

Delicious!



Content undergoes decontextualization in AR



Demo

Shopping with augmented reality



What's going on?



Shopping with augmented reality



Demo

Virtual reality on campus



Virtual reality on campus

5

Smart infrastructure and digital signage



Demo

**Freshman year on a smart
campus**



Freshman year on a smart campus

6

Epilogue

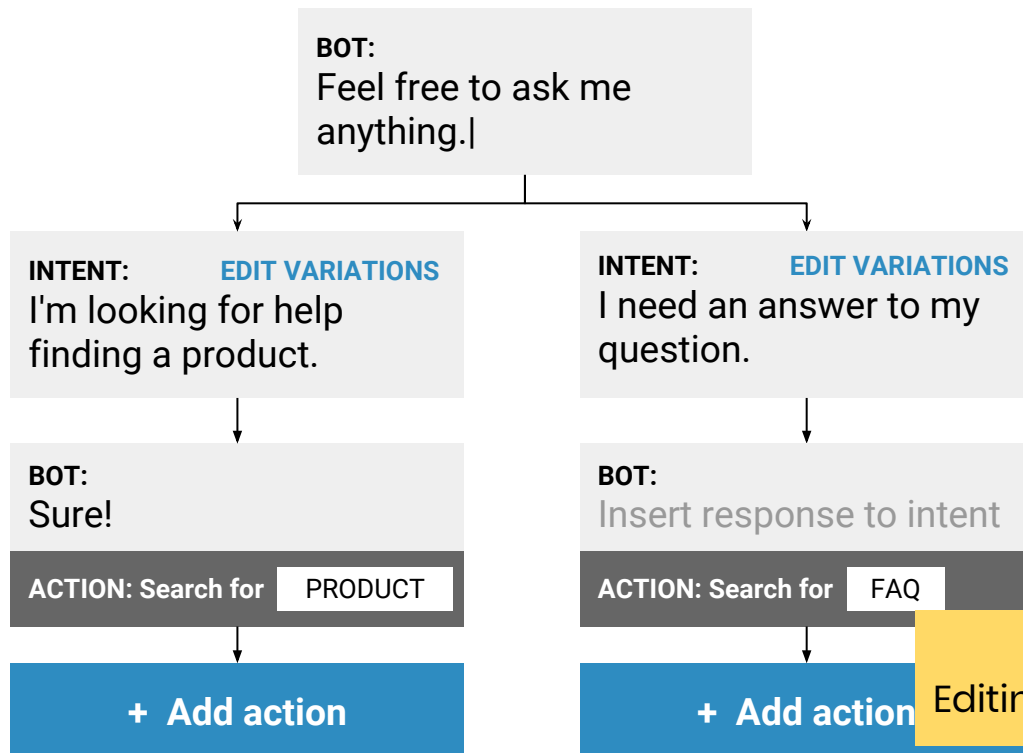
The future of Drupal

**These new experiences will define
the future of Drupal**



Create a conversational interaction flow

Build an interaction flow to delineate which content is available to your Android and iOS chatbot, your web-driven chatbot, and your Alexa and Google Home voice assistants.



Your content

FAQ

Where can I purchase Pocari Sweat?

PRODUCT

Pocari Sweat

STORE LOCATION

Shinagawa

PROMOTION

10% off all sports drinks

Editing conversational content



Create an augmented reality overlay

Use this interface to determine which content to deliver to an augmented reality overlay. The appearance of the overlay will be determined by the application providing augmented reality. Provide a target and content to return.

TARGET IMAGE



RETURNED CONTENT

PRODUCT

TITLE
Pocari Sweat

DESCRIPTION
The best sports drink in the
entire world, with a mild
grapefruit flavor.

DESCRIPTION

ALTERNATE NAME
Pocari

Your content

FAQ

Where can I purchase
Pocari Sweat?

PRODUCT Use Teaser mode
Pocari Sweat Use Full mode
Add all fields

STORE LOCATION
Shinagawa

PROMOTION
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Editing augmented reality content



Create locational content

Insert a location and provide a push notification for each beacon by providing the beacon's unique identifier. Drupal will automatically provide a URL for the delivery of a push notification to the device.

LOCATION

STORE LOCATION

Shinagawa



PUSH NOTIFICATIONS

BEACON ID

48c59773-0b51-461e-93e6-36ae93f4d788

CONTENT TO PUSH

PROMOTION

10% off all sports drinks

Your content

FAQ

Where can I purchase
Pocari Sweat?

PRODUCT

Pocari Sweat

STORE LOCATION

Shinagawa


PROMOTION

10% off all sports drinks

Editing situational content



**A multifaceted Drupal is
a more future-proof Drupal**



**Thanks to you, Drupal's story
has only just begun**

Thank you!

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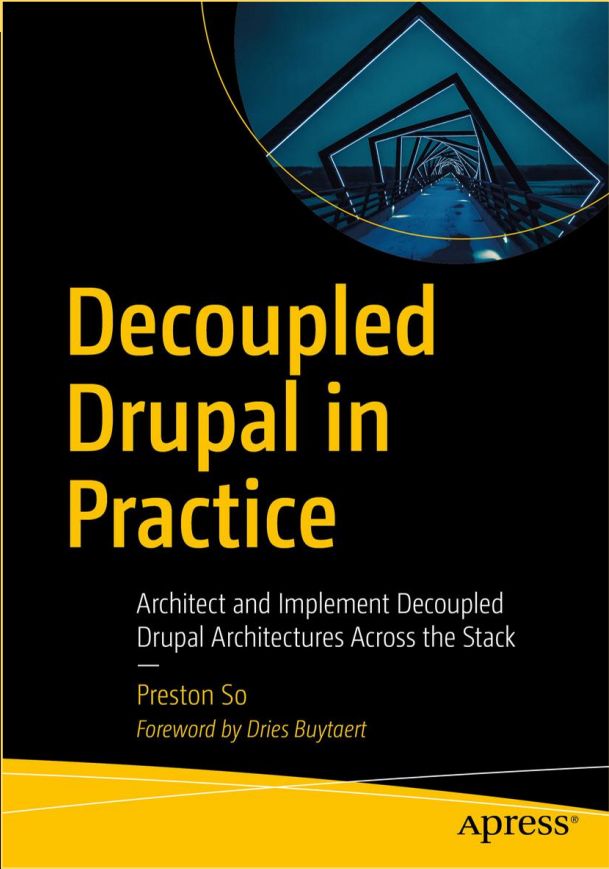
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Preston So

Foreword by Dries Buytaert

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